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(54) Pet food

(57) A pet food is made from a substantially homogeneous mixture having at least 50% animal tissues or derivatives thereof. At least a part of the balance of the mixture is carbohydrate, e.g. sugar and may also include cereals preferably a further part of the substance is of preservatives and/or humectants. The latter may be in the range 7.5% to 15%. The resulting mixture is shaped into a suitable body and the body is deep-fat fried. The resulting pet food has a long shelf life and a "meaty" taste.

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PET FOOD

The present invention relates to a processed food for pets especially, but not exclusively, for dogs and cats.

Whilst traditionally pets were fed on meat or fish, the majority of owners now prefer to feed their pets on a food which is readily available, quick and hygienic to prepare.

A number of processed foods have been developed to meet these requirements, such as tinned foods, semi-moist and muesli-type cereal mixtures.

Semi-moist and dry foods afford the greatest convenience to the owner but, suffer from low palatability and poor acceptability to the pet, when compared with meat or fish, or products containing substantial quantities of the same.

Thus, in preparing a processed pet food, the problem is one of producing a food which is highly palatable to the pet, aesthetically acceptable to the purchasing pet-owner, and which has a long shelf-life preferably at ambient temperatures.

The present invention provides a method of making a pet food which comprises preparing a mixture in which animal tissue or derivatives form the greatest part with a proportion of carbohydrate (e.g. sugar) and possibly cereals with one or more humectants and preservatives, the method being characterised by said mixture being deep-fat fried. The deep-fat frying has two effects. Firstly it

develops the meaty flavours which thereby improves the palatability of the product for the pet. Secondly, it pasteurizes the product,thereby, in conjunction with the preservatives, increasing its shelf-life to greater than six months at ambient temperature. In addition, the invention provides a pet food comprising a deep-fat fried mixture of animal tissue derivatives thereof with one or more humectants and preservatives.

The aim of the present invention is to provide a "meaty" product, i.e. one with a high level of animal tissue or derivatives. Therefore the pet food will typically contain at least 50% animal tissue or derivatives thereof, 10 to 15% sugar and 7.5 to 15% of the preservatives and humectants. The food may also contain cereal products in varying amounts. Preferably the preservative and humectant will contain potassium sorbate at levels of 5½ to 6½% of the total preservatve/humectant.

To further improve the palatability, extra flavourings may be sprayed on to the mixture after frying, or incorporating such flavourings in the original mixture. The product produced according to the present invention has a good shelf-life at ambient temperature and of course this life may be further improved by storage in a sealed pouch or pack containing a controlled atmosphere.

In order that the present invention may be more fully understood, embodiments of the invention will now be described in more detail in the examples below.

Stage 1. Preparing the mixture comprising animal tissues

The animal tissue components of the example formulations shown in Table 1 are placed in a suitable mixer e.g. planetary bowl for batches of less than 20kg, or twin screw contra-rotating U-trough mixer for larger batches. The dry ingredients, followed by preparation of humectants and preservatives are then added and the complete mixture processed to homogeneity. It is important that the mixture is as homogeneous as possible. Whilst the above describes the mixing of ingredients in a particular order it will be clear to one skilled in the art that this may be varied.

Where chicken frames are used these are prepared by milling to a fine paste-like consistency. There must be no addition of water during the milling. Alternatively, other bone residues may be used instead of chicked bones. The bran and sugar must be of fine mesh size and the rusk of a pinhead variety. The protein concentrate may be a spray dried animal or milk protein derivative, such as skimmed milk or whey poweder. Alternatively, a soya protein concentrate may be used. The vitamin/mineral mix may be provided by a pre-balanced commercial variety such

as Dalgetty 8010. The offal should be raw and washed and designated "fit" for animal consumption. The preservative and humectant is preferable provided in the form of a liquid premix. A suitable premix which has mycostatic activities is provided by a mixture comprising 84.6% propylene glycol, 5.8% Hydrolysed Vegetable Protein (HVP), 5.8% potassium sorbate and 3.8% water.

The examples given mainly refer to formulations suitable for dogs but formulations comprising fish derivatives may also be prepared so as to make a food particularly palatable to cats.

Stage 2. Preparation of balls and their frying

Once mixed to homogeneity the formulation mixture may then be discharged into a ball-forming machine and balls of the mixture thereby prepared. The balls are then flash-fried in fat, drained and packed.

Table 1

Ingredients	Formulations (%)			
	1	2	3	4
Milled chicken frames	55.00	19.25	13.75	8.25
Bran	14.00	14.00	14.00	14.00
Sugar	10.00	10.00	10.00	10.00
Preservative/humectant	8.75	8.75	8.75	8.75
Protein concentrate	6.00	4.00	3.00	2.00
Rusk	6.00	8.00	9.00	10.00
Vitamin/Mineral mix	0.25	0.25	0.25	0.25
Minced tripe	-	15.00	16.00	18.00
Minced lights	-	15.00	16.00	18.00
Minced heart/liver	-	5.75	9.25	10.75

CLAIMS

1. A pet food comprising a deep-fat fried body, the body being a substantially homegeneous mixture having at least 50% animal tissues or derivatives thereof and at least a part of the balance of the mixture being carbohydrates.

2. A pet food according to claim , wherein a further part of the balance of the mixture is of preservatives and/or humectants.

3. A pet food according to claim 2, wherein the preservatives and/or humectants comprise 7.5% to 15% of the mixture.

4. A pet food according to claim 2 or claim 3, wherein the preservative and/or humectant contains potassium sorbate.

5. A pet food according to any one of the preceding claims, wherein the carbohydrates include sugar to a total of 10 to 15% of the mixture.

6. A pet food according to any one of the preceding claims, wherein the carbohydrates include cereal products.

7. A method of making a pet food, comprising:

forming a body of a substantially homogeneous mixture of at least 50% animal tissues or derivatives thereof and at least a part of the balance of the mixture being carbohydrates; and

deep fat-frying the body.

8. A method of making a pet food substantially as herein described with reference to the formulations.

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